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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/542,786

08/02/2006

Paul J. Glatkowski

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EXAMINER

MILLER, DANIEL H

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

03/17/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/542,786	Applicant(s) GLATKOWSKI ET AL.	
	Examiner DANIEL MILLER	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/22/2007 and 7/20/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Wahlstadter (US 6,066,448 A).

3. In one embodiment, a support bearing a PMAMS (patterned multi-array multi-specific surface) contains one or more carbon fibers. These fibers may be amorphous or graphitic carbon. They may also be carbon nanotubes, buckeytubes or members of the fullerene family. In a preferred embodiment, a support bearing a PMAMS contains one or more carbon fibrils. Individual carbon fibrils may have diameters that range from about 3.5 nm to 70 nm, and length greater than 10^{sup.2} times the diameter (column 12). Carbon materials can be made to form aggregates (column 12). Two or more individual carbon fibrils may form microscopic aggregates of entangled fibrils (column 12 and 31). The carbon fibers form individual separated aggregates (see figures).

4. The PMAMS binding surface (carbon fibrils) have conductive projections (1006) (e.g., fine wire or other protrusions) of the working electrode extend the electrical field around the ECL label in the PMAMS binding domains (column 37 and figure 9). The

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binding domains of the PMAMS can include a (thermoplastic) polymer resin (column 20 line 50-55).

5. A transparent support having the PMAMS which containing one or more binding domains is brought into contact with a fibril mat electrode (column 41 line 15-35).

6. The fibril mat may have broadly a thickness between 0.01 micrometers and 10,000 micrometers overlapping applicant's claimed range (column 29 line 15-25). The mat electrode is dispersed in paraffin, plastics, polymers, or elastomers (column 31 line 5-10). The fibril mats are deposited on a transparent substrate (column 34 line 40).

7. Reagents may be flowed either between the support/binding domains and the fibril mat, or through the mat the binding domains. Light may pass from the binding domains, through the transparent support to a detector (column 41 line 15-30). (231) In another preferred embodiment, an electrode is coated with an optically translucent or transparent layer of carbon fibrils, so as to increase the effective surface area of the electrode. (232) Advantageously, the PMAMS supports and/or cassettes of the invention may be packaged as kits. The kit comprises one or more PMAMS supports prepared according to the invention for conducting ECL reactions (column 41 line 20-30).

8. The disclosed structure reads on applicant's claimed invention and inherently would be expected to have the claimed transparency and resistivity given the substantial similarity in structure.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL MILLER whose telephone number is (571)272-1534. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571)272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Daniel Miller

/KEITH D. HENDRICKS/

Supervisory Patent Examiner, Art Unit 1794